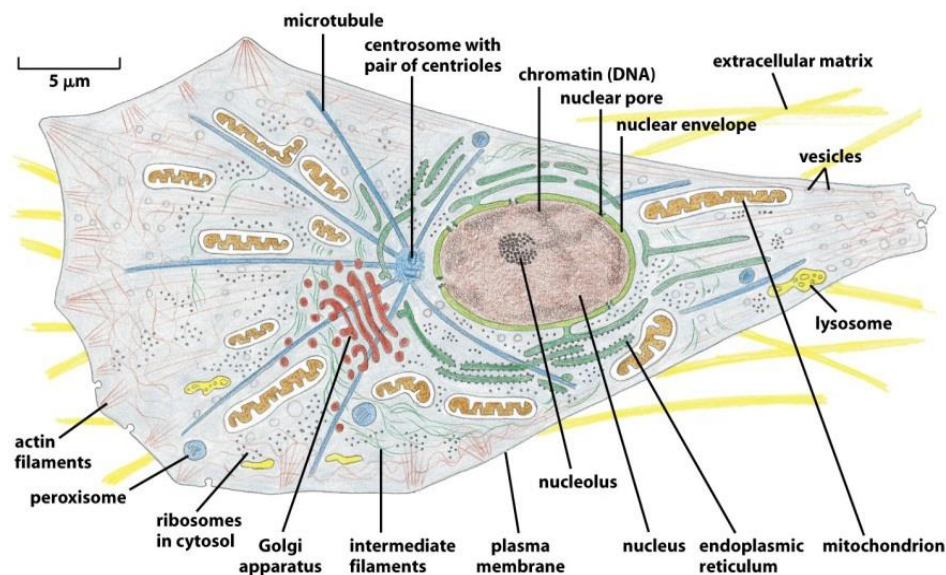


Cellular Pathology

Course Overview

This course provides the student with a fundamental in-depth understanding of current concepts of cell biology and of basic types of pathological processes at the cellular level. Microscopic, submicroscopic, and molecular models of both normal and diseased cells will be critically examined and discussed. Special attention will be given to normal and pathological changes associated with cellular organelles and with alterations in their structure and activity in various disease states. Cellular processes such as apoptosis and cell death, DNA damage and repair, telomere function and dysfunction, melanocyte function in the skin and consequences of its dysfunction, cellular changes which occur during aging of the skin, and the effects of viruses on cell structure and function will be discussed.

The course will consist of lectures and students will be graded on the basis of two written examinations. Classes will be held on Mondays and Thursdays from 4 – 5:50 pm and will be given using a hybrid format. Lectures will be presented in person in the classroom and via Webex and will be recorded.



Alberts, B. et al., Molecular Biology of the Cell, 2008

Course Director:

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CELLULAR PATHOLOGY – PATH 5100Q

SCHEDULE OF LECTURES - 2023

Lectures will be held from 4-5:50 pm on Mondays and Thursdays

DATE	TITLE	SPEAKER
Oct 23	Nucleus and Mitochondria – Normal and Pathological Ultrastructure and Function	Dr. M. Lambert
Oct 26	Peroxisomes and Endoplasmic Reticulum – Normal and Pathological Ultrastructure and Function	Dr. M. Lambert
Oct 30	Golgi and Lysosomes – Normal and Pathological Ultrastructure and Function	Dr. M. Lambert
Nov 2	Microtubules – Structure, Function, and Pathological Changes Associated with Loss or Dysfunction	Dr. M. Lambert
Nov 6	Microfilaments – Structure, Function, and Pathological Changes Associated with Loss or Dysfunction	Dr. M. Lambert
Nov 9	Intermediate Filaments and the Nucleoskeleton – Structure, Function and Associated Disorders	Dr. M. Lambert
Nov 13	Review	
Nov 16	MID-TERM EXAM	
Nov 20	Cell Membranes, the Cortical Cytoskeleton, Cell Junctions, and Nuclear Pores – Structure, Function and Dysfunction	Dr. M. Lambert

Nov 27	Apoptosis and Non-Apoptotic Cell Death Mechanisms	Dr. R. Birge
Nov 30	Telomeres – Structure, Function and Dysfunction	Dr. U. Herbig
Dec 4	DNA Damage and Repair in Health and Disease	Dr. M. Lambert
Dec 7	The Melanocyte - Normal Structure and Function and Consequences of Pathological Changes	Dr. M. Lambert
Dec 11	Aging of the Skin – Normal and Pathological Cellular Changes	Dr. M. Lambert
Dec 14	Viruses – Effects on Cell Structure and Function; Pathological Consequences of Infection on Organ systems	Dr. M. Lambert
Dec 18	Review	
Dec 21	FINAL EXAM	

* There is no class since Dr. Lambert is away presenting a paper at a meeting